REMARKS

Applicants request reconsideration of the present application in view of this response. Claims 1-43 are currently pending. Claims 1, 12 and 13 are independent claims.

REJECTION UNDER 35 U.S.C. § 101

On page 2 of the Office Action, the Examiner rejects claims 1-11 and 14-22 under 35 U.S.C. § 101 as allegedly being directed to nonstatutory subject matter. In this rejection, the Examiner states:

> The language of the claim raises a question as to whether the claim is directed merely to an abstract idea or algorithm that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful and tangible result. It appears that the method could be performed entirely with a pencil and paper. See Office Action, pp. 2.

However, the Examiner provides no explanation as to how claims 1-11 and 14-22 are directed to nonstatutory subject matter. Instead, the Examiner merely paraphrases and/or recites portions of M.P.E.P. § 2106, which discusses 35 U.S.C. § 101 as it applies to, for example, computer related inventions.

M.P.E.P. § 2106(IV)(2)(b) states:

> For [computer-related] subject matter to be statutory, the claimed process ***must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts***. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat

> patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at 114-19). ***A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful.*** See *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1452. (***emphasis added***)

With regard to the present application, claim 1, for example, recites "A method for simulation of a technical system," including, "simulating the technical system on the basis of the result and of the setting constants." Accordingly, Applicants submit that the method, as set forth in claim 1, is clearly directed to a practical application (e.g., "a technical system," and/or "simulating the technical system,") of the abstract idea or mathematical algorithm (e.g., "determining a result", "temporarily storing the result", "simulating," etc.) in the technological arts.

For example, as stated above, a claim is limited to a practical application when the method "recites a step or act of producing something that is concrete, tangible and useful." As currently pending, claim 1, for example, recites "determining a result in the form of an influence of the parameters on the technical system, as a function of a set of parameters and on the basis of a request to an external source," and "simulating the technical system on the basis of the result and of the setting constants," each of which clearly produce a useful, concrete, and tangible result. That is, namely, "a result," and a "simulation of a technical system."

Moreover, the Examiner alleges that the method apparently, can be performed "entirely with a pencil and paper," and thus, is nonstatutory subject matter under 35 U.S.C. § 101. See office Action, pp. 2. Applicants disagree.

The first line of claim 1 states, "A method for simulation of a technical system," and the last line clearly states, "simulating the technical system on the basis of the result and of the setting constants." Applicants fail to understand how a technical system or simulating a technical system could be performed using a paper and pencil.

By the Examiner's above reasoning, it would appear that no method claim, which may include human operator intervention would be statutory under 35 U.S.C. § 101. This reasoning is in direct contrast to M.P.E.P. 2106(IV)(B)(2)(b)(i – iii), which defines "Safe Harbors," or specific categories in which statutory subject matter may be classified. Claimed processes (or methods) are clearly statutory if the processes fall into one of these Safe Harbors:

1. Independent Physical Acts (Post-Computer Process Activity);

2. Manipulation of Data Representing Physical Objects or Activities (Pre-Computer Process Activity); or

3. Computer-Related Processes Limited to a Practical Application in the Technological Arts.

Safe Harbors 1 and 2 above require physical acts to be performed outside the computer (e.g., manipulation of tangible objects, measurement of physical objects outside the computer, etc.) independent of the steps to be performed by a computer, any of which may involve (or encompass) human operator interaction. Accordingly, the Examiner's above reasoning contradicts at least Safe Harbors 1 and 2, as outlined above, and thus is reason enough why the Examiner's rationale is incorrect. As such, Applicants submit that the Examiner's rejection of claims 1-11 and 14-22 under 35 U.S.C. § 101 has no basis, is unreasonable, and clearly incorrect.

Accordingly, Applicants request withdrawal of the above rejection.

PRIOR ART REJECTIONS

Rejection under 35 U.S.C. § 102(b)

Claims 1, 4, 9, 10, 12, 13, 25, 30, 31, 33, 36, 41 and 42 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by George (U.S. Patent No. 5,373,457). Applicants traverse this rejection.

Allegation of Inherency is Improper

On page 4, the Examiner correctly recognizes that George does not teach "simulating the technical system on the basis of the result and of the setting constants," as set forth in claim 1. The Examiner alleges that, "it would have been inherent that the technical system has setting constants (since every equation has a setting constant with a value of one)." See Office Action, pp. 4. Applicants disagree.

The mere possibility that equations could arguably have a setting constant with the value of 1 is not sufficient to establish that the system of George inherently simulates a "technical system on the basis of the result and of the setting constants," as set forth in claim 1.

MPEP section 2112 (IV) states:

> The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). (emphasis added)

As correctly recognized by the Examiner, and noted above, the deficiency (or "missing descriptive matter,") in George is not merely the "setting constants," but the "simulating of the technical system on the basis of the result and of the setting constants," as set forth in claim 1.

Therefore, even assuming that "a setting constant with the value of 1," (see Office Action, pp. 4), were inherent to George and sufficiently taught the "setting constants," of claim 1 (which Applicants do not admit), simulation of the technical system on the basis of the result and of the alleged setting constant with the value of 1 is clearly not. Thus, George is still deficient with regard to the "simulating the technical system on the basis of the result and of the setting constants," as set forth in claim 1. Accordingly, claim 1 is in condition for allowance.

For at least reasons somewhat similar to those set forth above, claims 12 and 13 are also in condition for allowance.

Claims 4, 9, 10, 25, 30, 31, 33, 36, 41 and 42 are also allowable at least by virtue of their dependency upon claims 1, 12 or 13.

As such, Applicants request withdrawal of the above rejection.

Rejection under 35 U.S.C. § 103(a)

Claims 2, 5, 6, 14, 16, 17, 20, 21, 23, 26, 27, 34, 37 and 38 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over George in view of Salimi (U.S. Patent No. 5,883,818). Applicants traverse this rejection.

On pages 8 and 9 of the Office Action, the Examiner correctly recognizes that George fails to teach any or all of the features set forth in claims 2, 5, 6, 14, 16, 17, 20, 21, 23, 26, 27, 34, 37 and/or 38. The Examiner relies upon Salimi to allegedly teach these features.

In re Dembiczak, 175 F.3d. 994 (Fed. Cir. 1999) set forth rigorous requirements for establishing a *prima facie* case of obviousness under 35 U.S.C. §103(a). According to *Dembiczak*, in combining references under 35 U.S.C. §103(a), the Examiner must show evidence of some suggestion teaching or motivation to combine prior art references to avoid "hindsight-based obviousness analysis" *Id.* at 999. This evidence may flow from (1) the prior art references themselves, (2) the knowledge of one of ordinary skill in the art at the time the invention was made, or (3) from the nature of the problem to be solved. *Id.*

In re Kotzab, 217 F.3d 1365 (Fed. Cir. 2000) further elaborated on the requirements established by the *Dembiczak* court. For example, in *Kotzab*, the court stated,

> [While] the test for establishing an implicit teaching, motivation, or suggestion is what [a combination of two statements from the prior art] would have suggested to those of ordinary skill in the art, the two statements cannot be viewed in the abstract. Rather, they must be considered in the context of the teaching of the entire reference. Further, a rejection cannot be predicated on the mere identification in [the prior art] of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Kotzab*, 217 F.3d at 1371. Emphasis added.

According to *Kotzab*, elements found in prior art references cannot be considered in a "vacuum." Instead, they must be considered in conjunction with all other teachings in the respective prior art reference from which the

teachings flow. That is, in determining obviousness, one must take into account the context of the prior art patent or reference as a whole.

Moreover, identification of specific elements or "individual components," (*Id.*) in the prior art references cannot be used in a proper obviousness rejection under 35 U.S.C. § 103(a).

With regard to claim 2, for example, the Examiner relies upon Salimi to teach, "designing the technical system on the basis of the simulation," alleging that the skilled artisan would look to Salimi for the deficiencies of George for the advantage of "more accurate timing analysis." However, this "advantage," allegedly set forth in Salimi is an advantage of the method including the modeling as taught by Salimi. That is, the method set forth in col. 2, ll. 4-27 of Salimi produces the alleged advantage set forth in col. 2, ll. 33-37. Accordingly, the fact that the model of Salimi provides the alleged "advantage," is reason enough why the skilled artisan would not be motivated to combine the teachings of George and Salimi. That is, the skilled artisan would not be motivated to modify the teachings of his/her invention, which serve as the basis of the advantage he/she allegedly provides.

In view of the above, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness for combining George and Salimi under 35 U.S.C. § 103(a). As such, Applicants request withdrawal of the above rejection of claim 2. For at least reasons somewhat similar, Applicants request withdrawal of the above rejections of claims 5, 6, 14, 16, 17, 20, 21, 23, 26, 27, 34, 37 and 38.

In addition, even assuming *arguendo* that George could be combined with Salimi (which Applicants do not admit for at least the reasons set forth above), Salimi would still fail to at least make up for the deficiencies of George with regard to claims 1, 12 or 13. Thus, claims 2, 5, 6, 14, 16, 17, 20, 21, 23, 26, 27, 34, 37 and 38 are in condition for allowance.

Rejection under 35 U.S.C. §103(a)

Claims 3, 15 and 24 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of Salimi and further in view of Sommerville, Ian, "Software Engineering," 1989, Third Edition, Addison-Wesley, hereinafter referred to as "Sommerville". Applicants traverse this rejection.

As discussed above, Applicants submit that the Examiner's alleged combination of George and Salimi is improper. In addition, even assuming *arguendo* that George and Salimi could be combined; the alleged combination is still deficient with regard to claim 1.

On page 10 of the Office Action, the Examiner correctly recognizes that George and Salimi fail to teach or suggest any or all of the features set forth in claims 3, 15 and/or 24. The Examiner relies upon Sommerville to allegedly teach these features.

However, even assuming *arguendo* that George, Salimi and/or Sommerville could be combined (which Applicants do not admit for at least reasons somewhat similar to those set forth above), Sommerville would still fail

to at least make up for the deficiencies of George and Salimi with regard to claims 1, 12 or 13. Thus, claims 3, 15 and 24 are in condition for allowance.

Rejection under 35 U.S.C. §103(a)

Claims 7, 18, 28 and 39 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of Salimi and further in view of common knowledge in the art. Applicants traverse this rejection.

The Examiner has taken Official Notice alleging that it was common knowledge in the art at the time of the invention (i.e., George and Salimi) to use extrapolation to determine additional results extending beyond a set of data points. Applicants disagree.

It is not sufficient to merely establish that at the time of the invention (i.e., George and Salimi) it was common knowledge "to use extrapolation to determine additional results extending beyond a set of data points." By contrast, if the Examiner is to properly establish a *prima facie* case of obviousness (under 35 U.S.C. § 103(a)) with respect to the alleged combination of George, Salimi and common knowledge, the Examiner must show that it was common knowledge at the time of the invention (i.e., George and Salimi) to determine "additional influence," by at least one of "interpolation and extrapolation," as set forth in claim 7, for example. See above traversal of George and Salimi combination. Absent this showing, a *prima facie* case of obviousness has not been established and the rejection should be withdrawn.

In addition, Applicants challenge the Examiner's Official Notice.

Rejection under 35 U.S.C. §103(a)

Claims 8, 19, 29 and 40 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of Salimi and further in view of Poggio et al., "Networks for Approximation and Learning," September 1990, Proceedings of the IEEE, Vol. 78, No. 9, hereinafter referred to as "Poggio." Applicants traverse this rejection.

As discussed above, Applicants submit that the Examiner's alleged combination of George and Salimi is improper. In addition, even assuming *arguendo* that George and Salimi could be combined; the alleged combination is still deficient with regard to claims 1, 12 or 13.

On page 12 of the Office Action, the Examiner correctly recognizes that George and Salimi fail to teach or suggest any or all of the features set forth in claims 8, 19, 29 and/or 40. The Examiner relies upon Poggio to allegedly teach these features.

However, even assuming *arguendo* that George, Salimi and/or Poggio could be combined (which Applicants do not admit for at least reasons somewhat similar to those set forth above), Poggio would still fail to at least make up for the deficiencies of George and Salimi with regard to claims 1, 12 or 13. Thus, claims 8, 19, 29 and 40 are in condition for allowance.

Rejection under 35 U.S.C. §103(a)

Claims 11, 32 and 43 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of "Microsim Pspice A/D & Basic+," 1997, Microsim Corporation, hereinafter referred to as "Microsim." Applicants traverse this rejection.

On page 12 of the Office Action, the Examiner correctly recognizes that George fails to teach or suggest any or all of the features set forth in claims 11, 32 and/or 43. The Examiner relies upon Microsim to allegedly teach these features.

However, even assuming *arguendo* that George and Microsim could be combined (which Applicants do not admit for at least reasons somewhat similar to those set forth above), Microsim would still fail to at least make up for the deficiencies of George with regard to claims 1, 12 or 13. Thus, claims 11, 32 and 43 are in condition for allowance.

Rejection under 35 U.S.C. §103(a)

Claim 22 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of Salimi and further in view of Microsim. Applicants traverse this rejection.

As discussed above, Applicants submit that the Examiner's alleged combination of George and Salimi is improper. In addition, even assuming *arguendo* that George and Salimi could be combined; the alleged combination is still deficient with regard to claims 1, 12 and 13.

On page 13 of the Office Action, the Examiner correctly recognizes that George and Salimi fail to teach or suggest any or all of the features set forth in claim 22. The Examiner relies upon Microsim to allegedly teach this feature.

However, even assuming *arguendo* that George, Salimi and/or Microsim could be combined (which Applicants do not admit for at least reasons somewhat similar to those set forth above), Microsim would still fail to at least make up for the deficiencies of George and Salimi with regard to claim 1, 12 or 13. Thus, claim 22 is in condition for allowance.

Rejection under 35 U.S.C. §103(a)

Claim 35 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over George in view of Sommerville. Applicants traverse this rejection.

On page 14 of the Office Action, the Examiner correctly recognizes that George fails to teach or suggest any or all of the features set forth in claim 35. The Examiner relies upon Sommerville to allegedly teach these features.

However, even assuming *arguendo* that George and Sommerville could be combined (which Applicants do not admit for at least reasons somewhat similar to those set forth above), Sommerville would still fail to at least make up for the deficiencies of George with regard to claims 1, 12 or 13. Thus, claim 35 is in condition for allowance.

CONCLUSION

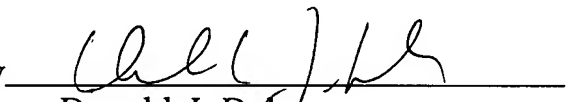
In view of above remarks, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Andrew M. Waxman, Reg. No. 56,007, at the number of the undersigned listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully Submitted,

HARNESS, DICKEY & PIERCE, PLC

By 

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